

Claims:

SchAD 1. A recess within a wall of an expandable tubular, the recess comprising at least one arcuate wall, the recess serving as a housing for one or more of the following: control lines, instrumentation lines, fiber optics, and downhole sensors.

SUB33 2. The recess of claim 1, wherein said wellbore includes an open hole portion such that said expandable tubular is expanded into substantial contact with the formation.

3. The recess of claim 1, wherein said wellbore defines a cased hole completion such that said expandable tubular is expanded into substantial contact with the casing.

4. The recess of claim 2, wherein said recess comprises:

a first arcuate wall having a first end and a second end; and
a second wall having a first end and a second end, said first and second ends of said first and second walls being connected so as to define a housing between said first and second walls.

5. The recess of claim 6, wherein said first and second walls are connected at first and second opposite points.

6. The recess of claim 6, wherein said first and second walls are connected by first and second opposite end walls.

7. The recess of claim 1, wherein said expandable downhole tubular is a sand screen for use in a wellbore within a formation.

8. The recess of claim 7, further comprising a filler material to aid in holding the one or more of the following: control lines, instrumentation lines, fiber optics, and downhole sensors, within said recess.

9. The recess of claim 7, wherein said first and second walls are both arcuate.

Sub A2 10. The recess of claim 1 further comprising an encapsulation within said recess, the recess serving as a housing for one or more of the following: control lines, instrumentation lines, fiber optics, and downhole sensors, which reside within said encapsulation, the encapsulation comprising:

a first arcuate wall having a first end and a second end; and
a second wall having a first end and a second end, said first and second ends of said first and second walls of said encapsulation being connected so as to define a housing between said first and second walls of said encapsulation.

Sub B3 11. The recess of claim 10, wherein said expandable downhole tool is a sand screen for use in a wellbore within a formation.

12. The recess of claim 11, wherein said wellbore includes an open hole portion such that the sand screen is expanded into substantial contact with the formation.

13. The recess of claim 11, wherein said wellbore defines a cased hole completion such that said sand screen is expanded into substantial contact with the casing.

14. The recess of claim 11, wherein said sand screen comprises a perforated base pipe layer, a filtering media layer around said base pipe layer, and a perforated outer shroud around said filtering media layer, and wherein said recess resides within said outer shroud.

Sub B4 15. The recess of claim 11, wherein said encapsulation is fabricated from a deformable material.

16. The recess of claim 15, wherein said encapsulation further serves as a housing for at least one metal tubular, said at least metal tubular housing said one or more of the following: control lines, instrumentation lines and downhole sensors.

17. The recess of claim 16, further comprising a filler material to aid in holding the one or more of the following: control lines, instrumentation lines, fiber optics, and

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Sub B4 > downhole sensors, within said encapsulation.

18. The recess of claim 11, wherein said encapsulation defines a crescent shape.

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